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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/475,696	12/30/1999	DARRYL L. DEFREESE	A-6307	6730

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SCIENTIFIC-ATLANTA, INC.  
INTELLECTUAL PROPERTY DEPARTMENT  
5030 SUGARLOAF PARKWAY  
LAWRENCEVILLE, GA 30044

EXAMINER
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PICH, PONNOREAY

ART UNIT	PAPER NUMBER
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2135

DATE MAILED: 05/16/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

09/475,696

Applicant(s)

DEFREESE ET AL.

Examiner

Ponnoreay Pich

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 18 April 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 65,66 and 68-84 is/are pending in the application. *Cancelled*
- 4a) ~~Of the above claim(s) 1-64 and 67 is/are withdrawn from consideration.~~
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 65,66 and 68-84 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_

### **DETAILED ACTION**

Claims 1-64 and 67 were previously cancelled. Claims 65-66 and 68-84 have been examined and are pending. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

### ***Docketing***

Please note that the application has been redocketed to a different examiner. Please refer all future communications regarding this application to the examiner of record using the information supplied in the final section of the office action.

### ***Response to Arguments***

Applicant pointed out in argument filed 4/18/2005 that the Pinder reference used by the previous examiner for the 103 rejections and the current application are commonly assigned to Scientific Atlanta at the time the invention was made. The date of the Pinder reference disqualifies it from being used for a rejection by the examiner. As such, the current examiner withdraws the previous examiner's rejection. However, note new rejections below.

### ***Claim Objections***

Claim 72 is objected to because of the following informalities: On line 9, the claim recites "the a user", the examiner believes the applicant meant to just recite "a user". Appropriate correction is required.

***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 72-74 and 79-81 are rejected under 35 U.S.C. 102(b) as being anticipated by Wasilewski (US 5,420,866).

**Claim 72:**

Wasilewski discloses a method of providing a terminal in a conditional access system with service, the method comprising the steps of:

1. Providing the terminal with an electronic program guide that associates universal service identification numbers to services (col 10, lines 13-28).
2. Providing the terminal with an entitlement unit table that translates universal service identification numbers to entitlement unit numbers (col 12, lines 18-26).

Wasilewski does not explicitly disclose associating services with entitlement unit numbers and providing the terminal with an authorized entitlement unit number, wherein responsive to a user selecting a given service, the terminal determines whether the terminal is authorized to access the given service using the electronic program guide, the entitlement unit table, and the authorized entitlement unit number.

However, Wasilewski discloses decoder specific EMMs (i.e. entitlement unit numbers) are inserted into packets for transmission to the decoders/terminal (col 11,

lines 43-48). Wasilewski also discloses that EMMs are used to provide decoder specific conditional access information to decoders for controlling authorizations to different programs (col 14, lines 62-65). Further, Wasilewski discloses a user selecting a program or service and checking to see if a transmitted stream contains an EMM addressed to a specific decoder which authorizes the decoder to retrieve, decode, and output the program selected by the user (col 14, line 58-col 15, line 6). In light of these teachings, the limitations of associating services with entitlement unit numbers and providing the terminal with an authorized entitlement unit number, wherein responsive to a user selecting a given service, the terminal determines whether the terminal is authorized to access the given service using the electronic program guide, the entitlement unit table, and the authorized entitlement unit number are inherent to Wasilewski's method.

**Claim 73:**

Wasilewski further discloses wherein the authorized entitlement unit number is provided to the terminal in an entitlement management message (col 14, lines 62-65).

**Claim 74:**

Wasilewski does not explicitly disclose wherein a given entitlement unit number is associated with a plurality of services. However, Wasilewski discloses that EMMs are used to control access to different programs or tiers of program (col 4, lines 55-66). Since the EMMs disclosed by Wasilewski reads on entitlement unit numbers it is inherent that the EMMs are associated with a plurality of services since it can also be used to control access to tiers of programs—tiers implying multiple programming

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services on each tier (i.e. Basic cable, Basic with HBO, Basic with HBO and HBO2, ect.).

**Claim 79:**

Wasilewski discloses a method of providing a service to a terminal in a conditional access system, the method implemented at the terminal and comprising the steps of:

1. Receiving an electronic program guide that associates universal service identification numbers to services (col 10, lines 13-28).
2. Receiving an entitlement unit table that translates universal service identification numbers to entitlement unit numbers (col 12, lines 18-26).
3. Receiving an authorized entitlement unit number (col 14, lines 58-61).

Wasilewski does not explicitly disclose receiving user input for a given service and determining whether the terminal is authorized to access the given service using the electronic program guide, the entitlement unit table, and the authorized entitlement unit number.

However, Wasilewski discloses decoder specific EMMs (i.e. entitlement unit numbers) are inserted into packets for transmission to the decoders/terminal (col 11, lines 43-48). Wasilewski also discloses that EMMs are used to provide decoder specific conditional access information to decoders for controlling authorizations to different programs (col 14, lines 62-65). Further, Wasilewski discloses a user selecting a program or service and checking to see if a transmitted stream contains an EMM

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addressed to a specific decoder which authorizes the decoder to retrieve, decode, and output the program selected by the user (col 14, line 58-col 15, line 6). In light of these teachings, the limitations of receiving user input for a given service and determining whether the terminal is authorized to access the given service using the electronic program guide, the entitlement unit table, and the authorized entitlement unit number are inherent to Wasilewski's method.

**Claim 80:**

Wasilewski further discloses wherein the authorized entitlement unit number is provided to the terminal in an entitlement management message (col 14, lines 62-65).

**Claim 81:**

Wasilewski does not explicitly disclose storing the authorized entitlement unit number in a memory. However, if this number was not stored in a memory somewhere, then the terminal/decoder disclosed by Wasilewski would have nothing to use for comparison to determine if the terminal/decoder is authorized for that service.

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 65-66 and 68-71 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bestler et al (US 5,231,664) in view of Wasilewski (US 5,420,866).

**Claim 65:**

Bestler discloses a method of providing a first service in a conditional access system (col 5, lines 64-68), the method implemented in a terminal (Fig 1, item 40) and comprising the steps of:

1. Receiving a stream of packets, the stream of packets including packets comprising the first service (col 5, lines 45-54 and col 7, lines 50-52).
2. Determining a first entitlement unit number for the first service (col 5, lines 60-68 and col 8, lines 23-28).
3. Determining whether the terminal is authorized to access the first service based upon the first entitlement unit number and authorized entitlement unit number that is stored in the memory of the terminal (col 8, lines 23-36).
4. Responsive to determining the terminal is not authorized, displaying a second service that is different from the first service (col 8, line 60-col 9, line 4).

Bestler does not explicitly disclose the stream of packets comprising also entitlement control messages (ECMs) for the first service. However, Wasilewski discloses that it was known at the time the applicant's invention was made for streams of packets to also comprise ECMs for a service (col 4, lines 7-12).

In light of Wasilewski's teachings, it would have been obvious to one of ordinary skill in the art at the time the applicant's invention was made to modify Bestler's method



according to the limitations recited in claim 65. One of ordinary skill would have been motivated to incorporate Wasilewski's teachings as it would have allowed for a conditional access system which could decode MPEG-2 packets and Wasilewski discloses that the MPEG-2 Systems Committee decided that encryption related information would be transmitted to decoders in the form of ECMs (col 4, lines 7-12).

**Claim 66:**

Bestler does not disclose wherein responsive to determining the terminal is authorize to access the first service further including the steps of:

1. Parsing ECMs for the first service from the stream of packets, wherein each ECM includes a second entitlement unit number that is carried in the payload of the ECM.
2. Confirming that the terminal is authorized to access the first service based upon the second entitlement unit number and the authorized entitlement unit number.
3. Responsive to confirming that the terminal is authorized further include the steps of:
  - a. Recovering control words from the received ECMs.
  - b. Decrypting the service using the recovered control words.
  - c. Displaying the first service.

However, Wasilewski discloses wherein responsive to determining the terminal is authorize to access the first service further including parsing ECMs for the first service from the stream of packets (col 4, lines 44-50 and col 5, lines 58-62). Wasilewski does

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not disclose wherein each ECM includes a second entitlement unit number that is carried in the payload of the ECM. However, Wasilewski discloses Entitlement Management Messages (EMMs) and that there could be multiple EMMs in a service stream (Fig 3B). EMMs contain an identifier which reads on an entitlement unit number as these identifiers are used to identify which decoders are entitled/authorized to receive and decode a particular service. The examiner asserts that the applicant's choice of packaging entitlement unit numbers in the ECM packets instead of a separate EMM packet is an arbitrary choice and does not patentably differentiate from Wasilewski's choice of sending entitlement unit numbers in EMMs instead. The examiner also notes that Wasilewski discloses that the MPEG-2 Systems standard does not specify the format of an ECM (col 9, lines 54-56), therefore it would have been just as obvious to include entitlement unit numbers (including a second entitlement unit number) in the payload of the ECM instead of in EMMs.

Further, Wasilewski discloses that control words are used to encrypt and decrypt transmitted streams (col 3, lines 46-55). Wasilewski discloses that the MPEG-2 Systems Committee decided that encryption related information, i.e. control words, are carried in ECMs (col 4, lines 7-12). Wasilewski also discloses displaying the service (col 15, lines 6-14). In light of Wasilewski's teachings, it would have been obvious to one of ordinary skill in the art to further modify the combination method of Bestler and Wasilewski according to the limitations recited in claim 66. One of ordinary skill would have been motivated to do so for the same reasons given in claim 65.

**Claim 68:**

Bestler further discloses wherein the second service is a predetermined service (col 8, line 60-col 9, line 4).

**Claim 69:**

Bestler further discloses wherein the predetermined service is a barker service (col 8, line 60-col 9, line 4).

**Claim 70:**

Bestler further discloses wherein the second service is a message (col 9, lines 18-22).

**Claim 71:**

Bestler further discloses wherein the message instructs the user to select another service (col 9, lines 53-60).

Claims 75 and 76 are rejected under 35 U.S.C. 103(a) as being unpatentable over Wasilewski (US 5,420,866) in view of Chaney (US 6,035,037).

**Claim 75:**

Wasilewski discloses wherein the terminal is authorized for a first group of services, the first group of services having a first entitlement unit number (col 14, line 62-col 15, line 6). Wasilewski does not disclose further including the step of providing the terminal with a second authorized entitlement unit number, wherein the second authorized entitlement unit number is associated with a second group of services.

However, Chaney discloses EMMs being stored in smart cards (col 1, lines 49-60). Each EMM stored in the smart card entitles the owner of the smart card access to a service with an EMM that matches the one stored in the smart card. Further, Chaney discloses that at the time the applicant's invention was made, decoders/terminals with multiple smart cards were known, each smart card dedicated to a specific broadcaster (col 2, lines 60-67). This means that each smart card has a different EMM stored in it.

In light of these teachings by Chaney, it would have been obvious to one of ordinary skill in the art at the time the applicant's invention was made to modify Wasilewski's method according to the limitations recited in claim 75. One of ordinary skill would have been motivated to do so as Chaney discloses that his teachings would allow for simultaneous processing for multiple pay TV sources for purposes such as picture-in-picture or picture-outside-picture (col 2, lines 52-55). Note that different pay sources often have different EMMs.

**Claim 76:**

Wasilewski does not disclose wherein the given service is associated with both the first authorized entitlement unit number and the second authorized entitlement unit number. However, as mentioned in claim 75, terminals/decoders with multiple smart cards are known (col 1, lines 49-60). Such decoders are necessary to process multiple pay TV sources (col 2, lines 60-67), which allows for picture-in-picture (PIP) or picture-outside-picture (POP). The examiner asserts that the PIP and POP which results is a service which is associated with the first authorized entitlement unit number and the second authorized entitlement unit number. Therefore, it would have been obvious to

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one of ordinary skill in the art at the time the applicant's invention was made to further modify Wasilewski and Chaney's combination method according to the limitation recited in claim 76. One of ordinary skill would have been motivated to do so for the same reasons given in claim 75.

Claims 77-78 and 82-84 are rejected under 35 U.S.C. 103(a) as being unpatentable over Wasilewski (US 5,420,866).

**Claim 77:**

Wasilewski discloses further including the steps of providing the services in a stream of packets; multiplexing entitlement control messages for a given service into the stream of packets (Fig 3B).

Wasilewski does not disclose wherein each entitlement control message include a second entitlement unit number, wherein the terminal confirms that the terminal is authorized to access the given service using the second entitlement unit number and the authorized entitlement unit number. However, Wasilewski discloses that the MPEG-2 Systems standard does not specify the format of an ECM (col 9, lines 54-56). Note in Fig 3B there are multiple EMMs which reads on entitlement unit numbers. The examiner asserts that the choice of how to send the entitlement unit numbers to a given terminal is an arbitrary choice. It would be obvious to one of ordinary skill to send the second entitlement unit number either in an entitlement control message or as a separate EMM. As long as the terminal obtains the entitlement unit number, it is able to compare the received number with the stored authorized entitlement unit number to see

if the terminal is authorized to access the given service. Such a comparison is done by Wasilewski (col 14, line 62-col 15, line 6). Thus, claim 77 does not patentably differentiate from Wasilewski's method.

**Claim 78:**

Wasilewski does not disclose wherein the entitlement control messages include a plurality of entitlement unit numbers. However, Wasilewski discloses a plurality of entitlement unit number, i.e. EMMs (Fig 3B). The choice of how to send the entitlement unit numbers is an arbitrary choice and applicant's choice of sending the numbers via entitlement control messages is obvious and does not patentably differentiate from Wasilewski's method of sending them as individual EMM packets or as an EMM stream.

**Claim 82:**

Wasilewski does not disclose wherein the memory is included in a secure microprocessor having input/output terminals, and the secure microprocessor is characterized by the memory being unobservable at the input/output terminal. However, Chaney discloses the memory is included in a secure microprocessor having input/output terminals (Fig 4 and col 6, lines 56-59) and the secure microprocessor is characterized by the memory being unobservable at the input/output terminal (col 9, lines 1-4). It would have been obvious to one of ordinary skill in the art at the time the applicant's invention was made to modify Wasilewski's method with Chaney's teachings according to the limitations recited in claim 82. One of ordinary skill would have been motivated to do so as Chaney discloses it would ensure that unauthorized users do not access entitlement data (col 9, lines 1-4).

**Claim 83:**

Wasilewski discloses responsive to determining that the terminal is authorized to access the given service, further including the steps of:

1. Receiving a stream of packets, the streams of packets including packets comprising the given service and entitlement control messages (ECMs) for the given service (Fig 6 and col 13, lines 41-43, and col 14, lines 5-9).
2. Responsive to determining that the terminal is authorized to access the given service, further including the steps of:
  - a. Parsing ECMs for the given service from the stream of packets (col 14, lines 5-9).
  - b. Confirming that the terminal is authorized to access the given service based up the entitlement unit number and the authorized entitlement unit number (col 14, line 58-col 15, line 6).
  - c. Responsive to confirming that the terminal is authorized further including the steps of:
    - i. Recovering control words from the received ECMs (col 9, lines 41-47 and col 15, lines 6-14).
    - ii. Decrypting the given service using the recovered control words (col 9, lines 41-47 and col 15, lines 6-14).
    - iii. Displaying the given service (col 15, lines 6-14).

Wasilewski does not disclose wherein each ECM includes an entitlement unit number that is carried in the payload of the ECM. However, Wasilewski discloses EMMs which reads on entitlement unit numbers (Fig 3B). The choice of how to send the entitlement unit numbers is an arbitrary choice and applicant's choice of sending the numbers via entitlement control messages is obvious and does not patentably differentiate from Wasilewski's method of sending them as individual EMM packets or as an EMM stream.

**Claim 84:**

Wasilewski does not disclose the entitlement control message includes a plurality of entitlement unit numbers, and the step of confirming that the terminal is authorized to access the given service further includes the step of comparing each of the entitlement unit numbers with the authorized entitlement unit number until one of the entitlement unit numbers matches the authorized entitlement unit number, wherein the terminal is authorized to access the given service if there is a match.

However, Wasilewski discloses a plurality of entitlement unit number, i.e. EMMs (Fig 3B). The choice of how to send the entitlement unit numbers is an arbitrary choice and applicant's choice of sending the numbers via entitlement control messages is obvious and does not patentably differentiate from Wasilewski's method of sending them as individual EMM packets or as an EMM stream. Further, given that there are multiple entitlement unit numbers in the form of EMMs in Wasilewski's method, it is obvious that to confirm that the terminal is authorized to access the given service, each of the entitlement unit numbers (i.e. EMMs) must be compared with the authorized



entitlement unit number to determine if any of them match. It is also obvious that if there is a match that the terminal is authorized to access the given service. Therefore, in light of the above disclosure, the limitations as recited in claim 84 does not patentably differentiate from Wasilewski's method and teachings.


***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ponnoreay Pich whose telephone number is 571-272-7962. The examiner can normally be reached on 8:00am-4:30pm Mon-Fri.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Kim Vu can be reached on 571-272-3859. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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